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Notice of Allowability	Application No.	Applicant(s)	
	10/081,800	NISHIDA ET AL.	
	Examiner	Art Unit	
	Jeanne A. Di Grazio	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment of December 23, 2004*.

2. ☒ The allowed claim(s) is/are *56,57,61-64,68,69,71,73,75-78,81-87,89,90,93 and 101-103*.

3. ☒ The drawings filed on *22 Feb. 2002* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date (2) May 2002
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

Claims 56, 57, 61-64, 68, 69, 71, 73, 75-78, 81-87, 89, 90, 93 and 101-103 are allowed.

Said claims were indicated as objected to per Office Action of August 24, 2004 as allowable dependent claims, Applicant now having re-written said objected to claims in independent format.

The following is an examiner's statement of reasons for allowance:

As to claim 56, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *data lines, common electrode and pixel electrode bent by an odd number equal to or greater than 3 in each of said pixels* and in further combination with Applicant's other recited limitations.

As to claim 57, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *data lines, common electrode and pixel electrode bent by 'N' in each of said pixels and as defined in equation (A) as claimed* and in further combination with Applicant's other recited limitations.

As to claims 61 and 62, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a distance along a substrate between one of ends of a black matrix layer facing data lines and an end of the data lines located opposite to said one of ends of said black matrix layer is equal to or greater*

than 4 μm in a cross-section taken along a plane perpendicular to a direction in which the data lines extend and in further combination with Applicant's other recited limitations.

As to claims 63 and 64, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a black matrix layer formed on the second substrate and the black matrix layer facing the data lines overlaps the data lines by 4 μm or greater, when viewed from above* and in further combination with Applicant's other recited limitations.

As to claim 68, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a reverse-rotation preventing structure* and in further combination with Applicant's other recited limitations.

As to claim 69, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *an isolated floating electrode composed of a layer of which both gate and drain electrode are composed* and in further combination with Applicant's other recited limitations.

As to claims 71 and 73, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a black matrix layer having a width greater than a minimum width Dmin as defined and claimed* and in further combination with Applicant's other recited limitations.

As to claim 75, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a floating light-impermeable film composed of an opaque metal and overlapping data lines at recessions of*

bending portions of the data lines and in further combination with Applicant's other recited limitations.

As to claim 76, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a projection projecting from a bending portion of each of zig-zag shaped common electrode overlapping zig-zag shaped data lines* and in further combination with Applicant's other recited limitations.

As to claim 77, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a common electrode wider than data lines at opposite ends in a width-wise direction by 1.5 μm or greater* and in further combination with Applicant's other recited limitations.

As to claim 78, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a black matrix layer with a width smaller than a width of data lines and overlapping data lines in the entire length of the black matrix* and in further combination with Applicant's other recited limitations.

As to claim 81, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *an interlayer insulating layer and pixel auxiliary electrode as claimed* and in further combination with Applicant's other recited limitations.

As to claim 83, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *an interlayer insulating layer and pixel auxiliary electrode as claimed* and in further combination with Applicant's other recited limitations.

As to claim 84, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a common auxiliary electrode formed below a common electrode comprising a plurality of comb-teeth as claimed* and in further combination with Applicant's other recited limitations.

As to claim 89, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a pixel electrode formed of a second metal layer of which the drain electrode is formed in an area in which an image is displayed and a portion of the common electrode other than a portion composed of transparent metal and overlapping the data lines is formed of a first metal layer of which the gate electrode is* formed and in further combination with Applicant's other recited limitations.

As to claim 93, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *an interlayer insulating film sandwiched between data lines and common electrode overlapping data lines and composed of transparent metal wherein the insulating film being comprised of a first film comprised of an inorganic film and a second film comprised of an organic film covering the first film therewith* and in further combination with Applicant's other recited limitations.

As to claim 101, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *wherein a storage capacity is formed between a pixel electrode comprised of a second metal layer of which a drain electrode is formed and the common electrode lines comprised of a first metal layer of*

which a gate electrode is formed and in further combination with Applicant's other recited limitations.

As to claim 102, relevant art of record did not suggest, alone or in combination, an in-plane switching mode active matrix type liquid crystal display device comprising *a common and pixel electrode as claimed* and in further combination with Applicant's other recited limitations.

The above claimed limitations result in novel in-plane switching mode active matrix liquid crystal displays.

Relevant art of record, United States Patent Application US 2002/0057411 (to Kim et al.), United States Patent 6,356,331 (to Ono et al.) and United States Patent 6,219,019 (to Hasegawa et al.) did not teach or fairly suggest Applicant's claimed limitations.

As to claims 82, 85-87, 90, 99 and 103 they are dependent either directly or indirectly upon claims with allowable subject matter above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JDG

TARIFUR R. CHOWDHURY
PRIMARY EXAMINER